

U.S. Pat. App. Serial No. 10/719,933

AMENDMENT

Claims 1-434 (canceled).

435. (Original) A method of producing a modulated beam of electromagnetic energy comprising:

[a] providing an initial collimated beam of electromagnetic energy having randomly changing orientations of the selected component of the electromagnetic wave field vectors and having a substantially uniform flux intensity across substantially the entire beam;

[b] resolving from the initial collimated beam of electromagnetic energy an initial collimated first resolved beam of electromagnetic energy having substantially a first single selected predetermined orientation of a chosen component of the electromagnetic wave field vectors and an initial collimated second resolved beam of electromagnetic energy having substantially a second single selected predetermined orientation of a chosen component of the electromagnetic wave field vectors, whereby the first and second single selected predetermined orientation of the chosen component of the electromagnetic wave field vectors are different from one another;

[c] forming from the initial collimated first resolved beam of electromagnetic energy and the initial collimated second resolved beam of electromagnetic energy a substantially collimated rectangular initial single beam of electromagnetic energy having substantially the same single selected predetermined orientation of a chosen component of the electromagnetic wave field vectors across substantially the entire beam of electromagnetic energy and a substantially uniform flux intensity across substantially the entire initial collimated single beam of electromagnetic energy;

[d] separating the collimated rectangular initial single beam of electromagnetic energy into two or more separate collimated rectangular beams of electromagnetic energy whereby each of the separate collimated rectangular beams of electromagnetic energy has the same single selected predetermined orientation of a chosen component of the electromagnetic wave field vectors as that of the other separate collimated rectangular beams of electromagnetic energy and each separate collimated rectangular beam of electromagnetic energy having a different

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electromagnetic energy from the other separate collimated rectangular beams of electromagnetic energy;

[e] adjusting the electromagnetic energy by removing at least a predetermined portion of electromagnetic energy of at least one of the separate collimated rectangular beams of electromagnetic energy and directing the removed portion to a beam stop whereby the removed portion is removed;

[f] altering the single selected predetermined orientation of the chosen component of the electromagnetic wave field vectors of a plurality of portions of each separate collimated rectangular beam of electromagnetic energy by passing a plurality of portions of each separate collimated rectangular beam of electromagnetic energy through a respective one of a plurality of altering means whereby the single selected predetermined orientation of the chosen component of the electromagnetic wave field vectors of the plurality of portions of each separate beam of electromagnetic energy is altered in response to a stimulus means by applying a signal means to the stimulus means in a predetermined manner as the plurality of portions of each of the substantially collimated separate beams of electromagnetic energy passes through the respective one of the plurality of altering the single selected predetermined orientation of a chosen component of the electromagnetic wave field vectors;

[g] combining the altered separate collimated rectangular beams of electromagnetic energy into a single collimated rectangular collinear electromagnetic energy beam without substantially changing the altered selected predetermined orientation of the chosen component of the electromagnetic wave field vectors of the plurality of portions of each separate collimated rectangular beam of electromagnetic energy;

[h] resolving from the single collimated rectangular collinear electromagnetic energy beam a first collimated rectangular resolved electromagnetic energy beam having substantially a first single selected predetermined orientation of a chosen component of the electromagnetic wave field vectors and second collimated rectangular resolved electromagnetic energy beam having substantially a second single selected predetermined orientation of a chosen component of the electromagnetic wave field vectors, whereby the first and second single selected predetermined orientation of the chosen component of the electromagnetic wave field vectors are different from one another; and

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[i] passing one of the first collimated rectangular or second collimated rectangular resolved electromagnetic energy beams to a projection means.

436. (Original) A system of producing a modulated beam of electromagnetic energy suitable for projection of video images, comprising:

[a] means for providing an initial collimated beam of electromagnetic energy having randomly changing orientations of the selected component of the electromagnetic wave field vectors and having a substantially uniform flux intensity across substantially the entire beam;

[b] means for resolving from the initial collimated beam of electromagnetic energy an initial collimated first resolved beam of electromagnetic energy having substantially a first single selected predetermined orientation of a chosen component of the electromagnetic wave field vectors and an initial collimated second resolved beam of electromagnetic energy having substantially a second single selected predetermined orientation of a chosen component of the electromagnetic wave field vectors, whereby the first and second single selected predetermined orientation of the chosen component of the electromagnetic wave field vectors are different from one another;

[c] means for forming from the initial collimated first resolved beam of electromagnetic energy and the initial collimated second resolved beam of electromagnetic energy a substantially collimated rectangular initial single beam of electromagnetic energy having substantially the same single selected predetermined orientation of a chosen component of the electromagnetic wave field vectors across substantially the entire beam of electromagnetic energy and a substantially uniform flux intensity across substantially the entire initial collimated single beam of electromagnetic energy;

[d] means for separating the collimated rectangular initial single beam of electromagnetic energy into two or more separate collimated rectangular beams of electromagnetic energy whereby each of the separate collimated rectangular beams of electromagnetic energy has the same single selected predetermined orientation of a chosen component of the electromagnetic wave field vectors as that of the other separate collimated rectangular beams of electromagnetic energy and each separate collimated rectangular beam of electromagnetic energy having a different

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electromagnetic energy from the other separate collimated rectangular beams of electromagnetic energy;

[c] means for adjusting the by removing at least a predetermined portion of electromagnetic energy of at least one of the separate collimated rectangular beams of electromagnetic energy and directing the removed portion to a beam stop whereby the removed portion is absorbed;

[f] means for altering the single selected predetermined orientation of the chosen component of the electromagnetic wave field vectors of a plurality of portions of each separate collimated rectangular beam of electromagnetic energy by passing a plurality of portions of each separate collimated rectangular beam of electromagnetic energy through a respective one of a plurality of altering means whereby the single selected predetermined orientation of the chosen component of the electromagnetic wave field vectors of the plurality of portions of each separate beam of electromagnetic energy is altered in response to a stimulus means by applying a signal means to the stimulus means in a predetermined manner as the plurality of portions of each of the substantially collimated separate beams of electromagnetic energy passes through the respective one of the plurality of altering the single selected predetermined orientation of a chosen component of the electromagnetic wave field vectors;

[g] means for combining the altered separate collimated rectangular beams of electromagnetic energy into a single collimated rectangular collinear electromagnetic energy beam without substantially changing the altered selected predetermined orientation of the chosen component of the electromagnetic wave field vectors of the plurality of portions of each separate collimated rectangular beam of electromagnetic energy;

[h] means for resolving from the single collimated rectangular collinear electromagnetic energy beam a first collimated rectangular resolved electromagnetic energy beam having substantially a first single selected predetermined orientation of a chosen component of the electromagnetic wave field vectors and second collimated rectangular resolved electromagnetic energy beam having substantially a second single selected predetermined orientation of a chosen component of the electromagnetic wave field vectors, whereby the first and second single selected predetermined orientation of the chosen component of the electromagnetic wave field vectors are different from one another; and

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[i] means for passing one of the first collimated rectangular or second collimated rectangular resolved electromagnetic energy beam to a projection means.

437. (Original) A method of producing a modulated beam of light suitable for projection of video images, comprising:

[a] providing an initial collimated beam of light having randomly changing orientations of the selected component of the electric field vectors and having a substantially uniform flux intensity across substantially the entire beam;

[b] resolving from the initial collimated beam of light an initial collimated first resolved beam of light having substantially a first single selected predetermined orientation of a chosen component of the electric field vectors and an initial collimated second resolved beam of light having substantially a second single selected predetermined orientation of a chosen component of the electric field vectors, whereby the first and second single selected predetermined orientation of the chosen component of the electric field vectors are different from one another;

[c] forming from the initial collimated first resolved beam of light and the initial collimated second resolved beam of light a substantially collimated rectangular initial single beam of light having substantially the same single selected predetermined orientation of a chosen component of the electric field vectors across substantially the entire beam of light and a substantially uniform flux intensity across substantially the entire initial collimated single beam of light;

[d] separating the collimated rectangular initial single beam of light into two or more separate collimated rectangular beams of color whereby each of the separate collimated rectangular beams of color has the same single selected predetermined orientation of a chosen component of the electric field vectors as that of the other separate collimated rectangular beams of colors and each separate collimated rectangular beam of color having a different color from the other separate collimated rectangular beam of colors;

[e] adjusting the color by removing at least a predetermined portion of color of at least one of the separate collimated rectangular beams of color and directing the removed portion to a beam stop whereby the removed portion is absorbed;

[f] altering the single selected predetermined orientation of the chosen component of the electric field vectors of a plurality of portions of each separate

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collimated rectangular beam of color by passing a plurality of portions of each separate collimated rectangular beam of color through a respective one of plurality of altering means whereby the single selected predetermined orientation of the chosen component of the electric field vectors of the plurality of portions of each separate beam of color is altered in response to a stimulus means by applying a signal means to the stimulus means in a predetermined manner as the plurality of portions of each of the substantially collimated separate beams of electromagnetic energy passes through the respective one of the plurality of altering the single selected predetermined orientation of a chosen component of the electric field vectors;

[g] combining the altered separate collimated rectangular beams of color into a single collimated rectangular collinear color beam without substantially changing the altered selected predetermined orientation of the chosen component of the electric field vectors of the plurality of portions of each separate collimated rectangular beam of color.

[h] resolving from the single collimated rectangular collinear color beam having substantially a first single selected predetermined orientation of a chosen component of the electric field vectors and second collimated rectangular resolved color beam having substantially a second single selected predetermined orientation of chosen component of the electric field vectors, whereby the first and second single selected predetermined orientation of the chosen component of the electric field vectors are different from one another; and

[i] passing one of the first collimated rectangular or second collimated rectangular resolved color beam to a projection means.

438. (Original) A system of producing a modulated beam of light suitable for projection of video images, comprising:

[a] means for providing an initial collimated beam of light having randomly changing orientations of the selected component of the electric field vectors and having a substantially uniform flux intensity across substantially the entire beam;

[b] means for resolving from the initial collimated beam of light an initial collimated first resolved beam of light having substantially a first single selected predetermined orientation of a chosen component of the electric field vectors and an initial collimated second resolved beam of light having substantially a second single selected predetermined orientation of a chosen component of the electric field vectors,

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whereby the first and second single selected predetermined orientation of the chosen component of the electric field vectors are different from one another;

[c] means for forming from the initial collimated first resolved beam of light and the initial collimated second resolved beam of light a substantially collimated rectangular initial single beam of light having substantially the same single selected predetermined orientation of a chosen component of the electric field vectors across substantially the entire beam of light and a substantially uniform flux intensity across substantially the entire initial collimated single beam of light;

[d] means for separating the collimated rectangular initial single beam of light into two or more separate collimated rectangular beams of color whereby each of the separate collimated rectangular beams of color has the same single selected predetermined orientation of a chosen component of the electric field vectors as that of the other separate collimated rectangular beams of color and each separate collimated rectangular beam of color having a different color from the other separate collimated rectangular beams of color;

[e] means for adjusting the color by removing at least a predetermined portion of color of at least one of the separate collimated rectangular beams of color and directing the removed portion to a beam stop whereby the removed portion is absorbed;

[f] means for altering the single selected predetermined orientation of the chosen component of the electric field vectors of a plurality of portions of each separate collimated rectangular beam of color by passing a plurality of portions of each separate collimated rectangular beam of color through a respective one of a plurality of altering means whereby the single selected predetermined orientation of the chosen component of the electric field vectors of the plurality of portions of each separate beam of color is altered in response to a stimulus means by applying a signal means to the stimulus means in a predetermined manner as the plurality of portions of each of the substantially collimated separate beams of electromagnetic energy passes through the respective one of the plurality of altering the single selected predetermined orientation of a chosen component of the electric field vectors;

[g] means for combining the altered separate collimated rectangular beams of color into a single collimated rectangular collinear color beam without substantially changing the altered selected predetermined orientation of the chosen component of

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the electric field vectors of the plurality of portions of each separate collimated rectangular beam of color;

[ii] means for resoving from the single collimated rectangular collinear color beam a first collimated rectangular resolved color beam having substantially a first single selected predetermined orientation of a chosen component of the electric field vectors and second collimated rectangular resolved color beam having substantially a second single selected predetermined orientation of a chosen component of the electric field vectors, whereby the first and second single selected predetermined orientation of the chosen component of the electric field vectors are different one from another; and

[i] means for passing one of the first collimated rectangular or second collimated rectangular resolved color beam to a projection means.